

ABSTRACT OF THE DISCLOSURE

The present invention related to a chrome-free passivating solution, which comprises following components: effective amount of oxysalt containing transition metal, inorganic acids and water. Said oxysalt containing transition metal is selected from a group of oxysalt containing titanium, oxysalt containing zirconium, oxysalt containing hafnium, oxysalt containing vanadium, oxysalt containing niobium, oxysalt containing tantalum, oxysalt containing molybdenum, oxysalt containing tungsten, oxysalt containing manganese, oxysalt containing technetium, and oxysalt containing rhenium, and the weight ratio between said oxysalt containing transition metal and inorganic acids is in the range of 200~400:1. Said chrome-free passivating solution may further comprise one or more complexant. The problem that noxious hexad and trivalent chrome existing in the galvanizing coat and passivating solution of the prior art is solved substantially by the chrome-free passivating solution of the present invention, and said chrome-free passivating solution of the present invention can replace really the passivating solution containing hexad and trivalent chrome of prior art, to complete the passivation of electro-galvanizing coat and hot-galvanizing coat.